

Laparoscopic Transperitoneal Repair of Retrocaval Ureter: Report of Two Cases

M. RAMALINGAM, M.S., M.Ch., DNB (Urol), and K. SELVARAJAN, M.S., M.Ch. (Paediatric Surgery)

ABSTRACT

We report our experience in the laparoscopic transperitoneal repair of retrocaval ureter in two cases, highlighting a new technique of stenting.

INTRODUCTION

CONVENTIONAL MANAGEMENT of retrocaval ureter is by open repair. This uncommon anomaly is usually asymptomatic, and surgery is indicated when the patient is symptomatic or develops obstruction. There are sporadic reports of single cases being done laparoscopically.¹⁻⁸ Here, we present our experience in the management of two patients with emphasis on our new technique of stenting.

CASE REPORTS

Case 1

A 30-year-old multiparous lady who had two cesarian sections in the past presented with dull pain in the right flank of 6 months' duration. An intravenous urogram (IVU) showed delayed excretion and drainage of the contrast medium and the classical seahorse sign confirming retrocaval ureter. With the patient under general anesthesia, cystoscopy and retrograde pyelography was performed, which confirmed our diagnosis. A 0.035-inch Terumo guidewire was placed, which easily bypassed the obstruction. A double-J stent was then advanced to just below the obstruction under image-intensifier control. The distal end of an open-ended ureteral catheter was placed after the stent to serve as a stent pusher. Access to the stent and guidewire was kept sterile.

The patient was then put in the right lateral position with a 70° tilt. Pneumoperitoneum was created using a subcostal Veress needle (subcostal route, as this patient had had a lower midline incision for cesarian section). We used four ports: a supraumbilical 10-mm port for the telescope; a 5-mm port in the right subcostal region; a 5-mm port in the right iliac fossa,

and a 5-mm port on the right flank for suction/irrigation. Once we had mobilized the right colon adequately, the ureter and inferior vena cava came into view (Fig. 1A). The ureter was mobilized adequately and transected where it started to wind around the inferior vena cava (after pulling the guidewire distally) (Fig. 1B). The circumcaval segment of the ureter was transposed anteriorly (Fig. 1C). The ureteroureteral anastomosis was started with three interrupted 5-0 absorbable (Vicryl) sutures posteriorly. Once the posterior sutures were completed, the guidewire and subsequently the stent were advanced into the kidney under image-intensifier control with the help of the open-ended ureteral catheter as the pusher (Fig. 1D). In this way, the position of the patient did not have to be altered for cystoscopic confirmation of stent position. Three more interrupted sutures were placed anteriorly (Fig. 1E). A 14F tube drain was placed through the flank port. The colon was tacked to the white line of Toldt with two absorbable sutures.

The operating time was 240 minutes. The blood loss was insignificant. The patient was started on an oral diet on the first postoperative day. Nonopioid analgesia (diclofenac sodium) was sufficient. On the 3rd postoperative day, an ultrasound scan was done to check for the presence of any collection. The drainage tube was removed on the same day once we confirmed that there was no collection. The patient went home the following day. Normal activity was resumed after a week. The double-J stent was removed at the end of 8 weeks. The patient remained asymptomatic at 7-months' follow-up. A repeat ultrasound scan at 6 months revealed a normal collecting system. An IVU done subsequently showed good drainage.

Case 2

A 24-year-old man described dull right loin pain of 1 week's duration. An IVU confirmed retrocaval ureter. The surgical